

MAY 15 2000

TECH CENTER 1600/2900

a 1. (Amended) A purified protein which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181).

2. (Amended) A protein which binds specifically to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein comprises an amino acid sequence selected from the group consisting of SEQ ID NOS:1-55 or a binding portion thereof.

3. (Amended) A protein which binds specifically to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the amino acid sequence of the protein is selected from the group consisting of SEQ ID NOS:1-55, or a binding portion thereof.

a<sup>2</sup> 6. (Amended) A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: Xaa<sub>1</sub> Thr Xaa<sub>2</sub> Xaa<sub>3</sub> Ser Xaa<sub>4</sub> Xaa<sub>5</sub> Xaa<sub>6</sub> Asn Xaa<sub>7</sub> Arg (SEQ ID NO:253), where Xaa<sub>1</sub> is Ser or Thr; Xaa<sub>2</sub> is Arg or Lys; Xaa<sub>3</sub> is Lys or Arg; Xaa<sub>4</sub> is Ser or Leu; Xaa<sub>5</sub> is Arg, Ile, Val, or Ser; Xaa<sub>6</sub> is Ser, Tyr, Phe, or His; and Xaa<sub>7</sub> is Pro, His or Arg.

a<sup>3</sup> 16. (Amended) A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: Asp Xaa<sub>1</sub> Asp Xaa<sub>2</sub> Arg Arg Xaa<sub>3</sub> Xaa<sub>4</sub> (SEQ ID NO:254) where Xaa<sub>1</sub> is Ser, Ala, or Gly; Xaa<sub>2</sub> is Val or Gln; Xaa<sub>3</sub> is Pro, Gly, or Ser; and Xaa<sub>4</sub> is Trp or Tyr.

17. (Amended) A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179) and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: Val Arg Ser Gly Cys Gly Xaa<sub>1</sub> Xaa<sub>2</sub> Ser-~~63~~ (SEQ ID NO:255), where Xaa<sub>1</sub> is Ala or Phe; and Xaa<sub>2</sub> is Arg or His.

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18. (Amended) A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: NTRKSSRSNPR (SEQ ID NO:256) or STKRSLIYNHR (SEQ ID NO:257) or STGRKVFNR (SEQ ID NO:258) or TNAKHSSHNR (SEQ ID NO:259).

19. (Amended) A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: DSDVRRPW (SEQ ID NO:260) or AADQRRGW (SEQ ID NO:261) or DGRGGRSY (SEQ ID NO:262).

20. A protein of not more than 50 amino acids in length which specifically binds to a gastro-intestinal tract receptor, which receptor is selected from the group consisting of HPT1 (SEQ ID NO:178), hPEPT1 (SEQ ID NO:176), D2H (SEQ ID NO:179), and hSI (SEQ ID NO:181), in which the protein includes, positioned anywhere along its sequence, the contiguous amino acid sequence of: RVRS (SEQ ID NO:263) or SVRSGCGFRGSS (SEQ ID NO:264) or SVRGCGAHSS (SEQ ID NO:265).

48. (Amended) A nucleic acid comprising a nucleotide sequence selected from the group consisting of [SEQ ID NOS:110-163] SEQ ID NOS:111-163.